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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/663,964	09/16/2003	Glenn M. Boles	3-4-30	2670

7590 06/15/2007

Mr. Bruce S. Schneider
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EXAMINER	
MERED, HABTE	

ART UNIT	PAPER NUMBER
2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/663,964	BOLES ET AL.	
	Examiner	Art Unit	
	Habte Mered	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *9/16/2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action in response to communication filed on 9/16/2003.

2. Claims 1-20 are pending in the instant Application. Claims 1, 8, and 15 are the base independent claims.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. **Claims 1, 2, 5, and 7** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bordogna et al (US 20050041695), hereinafter referred to as Bordogna in view of Furlong et al (US 6, 741, 566), hereinafter referred to as Furlong.

Bordogna teaches a method and apparatus where by bandwidth of an egress port is adjusted by varying an inter-packet gap size between each packet so that the packets can be delivered without overflowing an egress buffer.

5. Regarding **claim1**, Bordogna teaches a process for transmission of a message in a system, the process comprising the steps of sending, receiving, or propagating 1) more than one packet (See Figure 2) and 2) an Interpacket gap **(Figure 2, elements 2201…N)**, the packet comprising a start-of-stream delimiter **(See Paragraph 23)**, and a series of at least 16 message bytes encoded in symbols uninterrupted by a control symbol **(Since Bordogna's system is fully compliant to IEEE 802.3 standards as illustrated in paragraphs 1 and 4 and given that the Applicant has admitted any**

IEEE 802.3 compliant system uses to send data 16 symbols by default Bordogna's system meets the limitation), and the Interpacket gap comprising a plurality of symbols decoded as Idle symbols. **(See Paragraphs 9 and 35 and Figure 6)**

Bordogna fails to teach that the Interpacket gap includes at least one non-Idle symbol such that the presence of the non-Idle symbol is part of a message.

Furlong teaches remote management of Ethernet networks and devices.

Furlong discloses that the Interpacket gap includes at least one non-Idle symbol such that the presence of the non-Idle symbol is part of a message. **(See Figure 2, element 70 and Column 2:65-67)**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Bordogna's process by using an Inter-packet gap that includes at least one non-Idle symbol such that the presence of the non-Idle symbol is part of a message. The motivation being such a scheme provides reliable in-band signaling as stated in Furlong's Column 1:5-10, 25-30, and 40-45.

6. Regarding **claim 2**, Bordogna discloses a system wherein the system comprises Fast Ethernet **(See Paragraph 5)**

7. Regarding **claim 5**, Bordogna discloses a system wherein the system comprises Gigabit Ethernet **(See Paragraph 5)**

8. Regarding **claim 7**, Bordogna fails to disclose a process wherein the message comprises a side channel.

Furlong discloses a process wherein the message comprises a side channel. **(See Figure 2, element 70 and Column 2:65-67. The side channel is management channel)**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Bordogna's process by using an Inter-packet gap that includes at least one non-Idle symbol such that the presence of the non-Idle symbol is part of a message and the message comprises a side channel. The motivation being such a scheme provides reliable in-band signaling as stated in Furlong's Column 1:5-10, 25-30, and 40-45.

9. **Claims 3 and 4**, are rejected under 35 U.S.C. 103(a) as being unpatentable over Bordogna in view of Furlong as applied to claim 2 above, and further in view of Shin et al (US Pub. No. 2003/0227947), hereinafter referred to as Shin.

Shin discloses method and system for communicating control information via out-of-band symbols.

10. Regarding **Claims 3 and 4**, the combination of Bordogna and Furlong fails to disclose a process wherein the non-idle symbol in the inter-packet gap is the symbol for zero and has only one zero bit.

Shin discloses a process wherein the non-idle symbol in the inter-packet gap is the symbol for zero and has only one zero bit. **(See Paragraphs 140 and 166 – Null symbol is used for control)**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination of Bordogna's and Furlong's process by

using an additional step wherein the non-idle symbol in the inter-packet gap is the symbol for zero and has only one zero bit. The motivation is to still comply to IEEE 802.3 standard for inter-packet gap while being able to send message using side channel or out-of-band signaling.

11. **Claim 6** is rejected under 35 U.S.C. 103(a) as being unpatentable over Bordogna in view of Furlong as applied to claim 5 above, and further in view of Song et al (US 2003/0137975 A1), hereinafter referred to as Song.

12. Regarding **Claim 6,** the combination of Bordogna and Furlong fails to disclose a process wherein the non-Idle symbol comprises a K28.5/Dxx.y or K28.1/Dxx.y sequence.

Song teaches Ethernet passive optical network with framing structure for native Ethernet traffic.

Song discloses a process wherein the non-Idle symbol comprises a K28.5/Dxx.y or K28.1/Dxx.y sequence. **(See Paragraph 70)**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination of Bordogna's and Furlong's process by using an additional step wherein the non-Idle symbol comprises a K28.5/Dxx.y or K28.1/Dxx.y sequence. The motivation is to still comply to ANSI T11 standard for inter-frame gap while being able to send message using side channel or out-of-band signaling.

13. **Claim 8** is rejected under 35 U.S.C. 103(a) as being unpatentable over Bordogna et al (US 20050041695), hereinafter referred to as Bordogna in view of Sambamurthy et al (US 6, 085, 248); hereinafter referred to as Sambamurthy.

14. Regarding **claim 8**, Bordogna teaches a process for transmission of a message in a system, the process comprising the steps of sending, receiving, or propagating 1) more than one packet (See Figure 2) and 2) an Interpacket gap **(Figure 2, elements 2201...N)**, the packet comprising a start-of-stream delimiter **(See Paragraph 23)**, and a series of at least 16 message bytes encoded in symbols uninterrupted by a control symbol **(Since Bordogna's system is fully compliant to IEEE 802.3 standards as illustrated in paragraphs 1 and 4 and given that the Applicant has admitted any IEEE 802.3 compliant system uses to send data 16 symbols by default Bordogna's system meets the limitation)**,

Bordogna fails to teach a packet that includes a plurality of non-standard symbols as part of a message.

Sambamurthy teaches MAC transmitter and parallel network management system.

Sambamurthy discloses a packet that includes a plurality of non-standard symbols as part of a message. **(Column 20:43-67)**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Bordogna 's process by transmitting a packet that includes a plurality of non-standard symbols as part of a message. The motivation as

stated by Sambamurthy is to allow the transmitter attend to the unique needs of the receiver as illustrated in Column 20:43-67.

15. **Claims 9, 10, and 13** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bordogna in view of Sambamurthy as applied to claim 8 above, and further in view of Leroux et al (US Pub. No. 2003/0235214), hereinafter referred to as Leroux.

16. Regarding **claim 9**, the combination of Bordogna and Sambamurthy fails to disclose a process wherein the inter-packet gap includes both at least one symbol decoded as an idle symbol and at least one non-idle symbol such that the presence of the non-idle symbol is part of a message.

Leroux discloses service channel over the Ethernet inter-frame gap.

Leroux discloses a process wherein the inter-packet gap includes both at least one symbol decoded as an idle symbol and at least one non-idle symbol such that the presence of the non-idle symbol is part of a message. **(See Figures 1 and 2 and paragraphs 13-15)**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination of Bordogna's and Sambamurthy's process by using an Inter-packet gap that includes at least one non-Idle symbol such that the presence of the non-Idle symbol is part of a message. The motivation being such a scheme provides reliable in-band signaling as stated in Leroux's paragraph 14.

17. Regarding **claim 10**, Bordogna discloses a system wherein the system comprises Fast Ethernet **(See Paragraph 5)**

18. Regarding **claim 13**, Bordogna discloses a system wherein the system comprises Gigabit Ethernet **(See Paragraph 5)**

19. **Claims 11 and 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bordogna in view of Sambamurthy and Leroux as applied to claim 10 above, and further in view of Shin et al (US Pub. No. 2003/0227947), hereinafter referred to as Shin.

20. Regarding **Claims 11 and 12**, the combination of Bordogna, Sambamurthy and Leroux fails to disclose a process wherein the non-idle symbol in the inter-packet gap is the symbol for zero and has only one zero bit.

Shin discloses a process wherein the non-idle symbol in the inter-packet gap is the symbol for zero and has only one zero bit. **(See Paragraphs 140 and 166 – Null symbol is used for control)**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination of Bordogna's, Sambamurthy's and Leroux's process by using an additional step wherein the non-idle symbol in the inter-packet gap is the symbol for zero and has only one zero bit. The motivation is to still comply to IEEE 802.3 standard for inter-packet gap while being able to send message using side channel or out-of-band signaling.

21. **Claim 14** is rejected under 35 U.S.C. 103(a) as being unpatentable over Bordogna in view of Sambamurthy and Leroux as applied to claim 13 above, and further in view of Song et al (US 2003/0137975 A1), hereinafter referred to as Song.

26. Regarding **Claim 14,** the combination of Bordogna, Sambamurthy and Leroux fails to disclose a process wherein the non-Idle symbol comprises a K28.5/Dxx.y or K28.1/Dxx.y sequence.

Song discloses a process wherein the non-Idle symbol comprises a K28.5/Dxx.y or K28.1/Dxx.y sequence. **(See Paragraph 70)**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination of Bordogna's, Sambamurthy's and Leroux's process by using an additional step wherein the non-Idle symbol comprises a K28.5/Dxx.y or K28.1/Dxx.y sequence. The motivation is to still comply to ANSI T11 standard for inter-frame gap while being able to send message using side channel or out-of-band signaling.

22. **Claims 15-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Azadet et al (US 20010034729), hereinafter referred to as Bordogna in view of Furlong et al (US 6, 741, 566), hereinafter referred to as Furlong.

Azadet teaches simple link protocol providing low overhead coding for LAN serial and WDM solutions.

23. Regarding **claim 15**, Azadet discloses a transmitter for a signal, the signal compnsing a plurality of packets and an interpacket gap **(See Figures 2 and 3)**, and wherein the transmitter includes 1) a buffer for a message to be inserted into the interpacket gap **(Figure 4, element 413 and paragraph 413)**, 2) a formatter that modifies the bit stream representing the message to allow identification of message boundaries and to allow establishment of word alignment within the bit stream, **(Figure**

4, element 415 and paragraph 40) and 3) an encoder that substitutes at least one symbol into the interpacket gap **(See Figure 7, element 710 and paragraph 63)**.

Azadet fails to disclose in place of at least one of the symbols decoded as an idle symbol to encode as a symbol at least a portion of the message in the interpacket gap.

Furlong teaches in place of at least one of the symbols decoded as an idle symbol to encode as a symbol at least a portion of the message in the interpacket gap. **(See Figure 2, element 70 and Columns 1:25-35, 2:55-64, and 2:65-67)**

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Azadet 's process by using in place of at least one of the symbols decoded as an idle symbol to encode as a symbol at least a portion of the message in the interpacket gap. The motivation being such a scheme provides reliable in-band signaling and is transparent to the normal system data transfer operation and bandwidth availability as stated in Furlong's Column 1:5-10, 25-30, and 40-45.

24. Regarding **claim 16**, Azadet discloses a transmitter wherein the formatter modifies the bit stream with an HDLC flag. **(See Paragraph 37)**

25. Regarding **claim 17**, Azadet discloses a transmitter wherein a logic zero is inserted by the formatter to avoid recognition of a portion of the message as the flag. **(See paragraph 41)**

26. Regarding **claim 18**, Azadet discloses a transmitter wherein the signal comprises an Ethemet signal. **(See Paragraph 19 and Figure 4)**

27. Regarding **claim 19**, Azadet discloses a transmitter wherein the substitution by the encoder represents logic 1. **(See paragraph 48)**

28. Regarding **claim 20**, Azafdet discloses a transmitter wherein the substitution by the encoder represents logic 0. **(See Paragraph 41)**

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Habte Mered whose telephone number is 571 272 6046. The examiner can normally be reached on Monday to Friday 9:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris H. To can be reached on 571 272 7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HM
06-10-2007

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